

METHOD FOR DETERMINING PHYSIOLOGICAL EFFECTS OF HEMOGLOBIN

ABSTRACT OF THE DISCLOSURE

- NO preferentially binds to the minor population of the hemoglobin's vacant hemes in a cooperative manner, nitrosylates hemoglobin thiols, or reacts with liberated superoxide in solution. The distribution of minor forms of hemoglobin can be tested and the results can be used to predict whether a composition of hemoglobin will scavenge, load, eliminate, or donate NO. Hemoglobin thus serves to regulate the chemistry of NO. SNO-hemoglobin transfers NO equivalents to the red blood cell anion transport protein AE1, which serves to export NO from red blood cells.
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- 10 Regulation of AE1 function is the basis for methods of therapy to affect levels of NO or its biological equivalent.